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Inventors: Stanton et al.
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This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of the claims:

Claim 1 (original): An isolated factor or active fragment thereof derived from the bacterium *Pseudomonas aeruginosa* that modulates plasma membrane expression of ABC transmembrane proteins.

Claim 2 (original): A composition comprising a mimetic of the isolated factor or active fragment thereof of claim 1.

Claim 3 (currently amended): A method for modulating plasma membrane expression of an ABC transmembrane protein in a cell comprising administering to the cell the isolated factor or active fragment of claim 1 ~~or the mimetic of claim 2.~~

Claim 4 (currently amended): A method for delivering a small molecule therapeutic agent to the central nervous system of a subject comprising:

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(a) administering to the subject the isolated factor or active fragment of claim 1 ~~or the mimetic of claim 2~~ so that expression of an ABC transmembrane protein which prevents small molecules from entering into or accumulating in the central nervous system is inhibited in the subject; and

(b) administering to the subject the small molecule therapeutic agent.

Claim 5 (currently amended): A method for treating cancer in a subject comprising:

(a) administering to the subject the isolated factor or active fragment of claim 1 ~~or the mimetic of claim 2~~ so that expression of an ABC transmembrane protein which confers drug resistance in cancer cells is inhibited in the subject; and

(b) administering to the subject an anti-cancer agent.

Claim 6 (original): The method of claim 5 wherein the cancer is resistant to therapy due to overexpression of ABC transmembrane proteins.

Claim 7 (original): The method of claim 5 wherein the

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cancer comprises a cancer of the central nervous system.

Claim 8 (currently amended): A method for treating secretory diarrhea in a subject comprising administering to the subject the isolated factor or active fragment of claim 1 ~~or the mimetic of claim 2~~ so that plasma membrane expression of intestinal CFTR is reduced and massive fluid and electrolyte losses in secretory diarrhea is inhibited.

Claim 9 (original): A composition comprising an agent which inhibits suppression of plasma membrane expression of ABC transmembrane proteins by the isolated factor or active fragment thereof of claim 1.

Claim 10 (original): The composition of claim 9 wherein the agent inhibits suppression of expression of CFTR.

Claim 11 (original): A method for inhibiting suppression of CFTR expression in cells infected by *Pseudomonas aeruginosa*, said method comprising administering to the cells the composition of claim 10.

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Claim 12 (original): A method for treating or alleviating symptoms of a subject suffering from cystic fibrosis comprising administering to the subject the composition of claim 10.

Claim 13 (original): The method of claim 12 further comprising administering to the subject a therapy which promotes CFTR exit from an endoplasmic reticulum, activates CFTR in an apical plasma membrane, or increases half-life of CFTR in an apical membrane.

Claim 14 (original): A method for identifying an agent for treatment or alleviation of symptoms of cystic fibrosis comprising assessing a test agent's ability to inhibit suppression of CFTR expression by the isolated *Pseudomonas aeruginosa* factor of claim 1, wherein the ability of the test agent to inhibit suppression of CFTR expression by the isolated *Pseudomonas aeruginosa* factor is indicative of the agent being useful for treatment or alleviation of symptoms of cystic fibrosis.

Claim 15 (new): A method for modulating plasma membrane expression of an ABC transmembrane protein in a

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cell comprising administering to the cell the mimetic of claim 2.

Claim 16 (new): A method for delivering a small molecule therapeutic agent to the central nervous system of a subject comprising:

(a) administering to the subject the mimetic of claim 2 so that expression of an ABC transmembrane protein which prevents small molecules from entering into or accumulating in the central nervous system is inhibited in the subject; and

(b) administering to the subject the small molecule therapeutic agent.

Claim 17 (new): A method for treating cancer in a subject comprising:

(a) administering to the subject the mimetic of claim 2 so that expression of an ABC transmembrane protein which confers drug resistance in cancer cells is inhibited in the subject; and

(b) administering to the subject an anti-cancer agent.

Claim 18 (new): The method of claim 17 wherein the

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cancer is resistant to therapy due to overexpression of ABC transmembrane proteins.

Claim 19 (new): The method of claim 17 wherein the cancer comprises a cancer of the central nervous system.

Claim 20 (new): A method for treating secretory diarrhea in a subject comprising administering to the subject the mimetic of claim 2 so that plasma membrane expression of intestinal CFTR is reduced and massive fluid and electrolyte losses in secretory diarrhea is inhibited.